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Art unit 2834
United States Department of Commerce
United States Patent and Trademark Office
Commissioner of Patents and Trademarks
Washington DC 20231

## Clarification of operation for patent 10/036/893

Dear Tran,

Thank you for you communication of March 21, 2003, in which you request clarification of operation for my propulsion device, and its one-directional force.

- I enclose an updated specification
- I have amended the specification to give a clearer explanation of operation. I include for your reference a copy of pages 13 and 14 in which I highlight the parts which explain operation
- Included in the highlighted section on page 13, I have added a paragraph that explains that the propulsion device needs an external power supply, ie it is not a "perpetual motion machine"
- I hope that the explanation is sufficiently clear to progress the application. The propulsion principle is based on relativity and although this is quite difficult to understand, the theory is sound. I will try to clarify further in this note:

When a current *I* flows in two parallel wires as in figure 1, each of the wires experiences an attractive force, F. The force experienced by wire 2 is due to the electro-magnetic wave from wire 1, interacting with the current of wire 2. Similarly, the force experienced by wire 1 is due to the electromagnetic wave from wire 2 interacting with the current of wire 1.
In each case, the electromagnetic wave from a wire, takes a non-zero amount of time to arrive at the other wire.

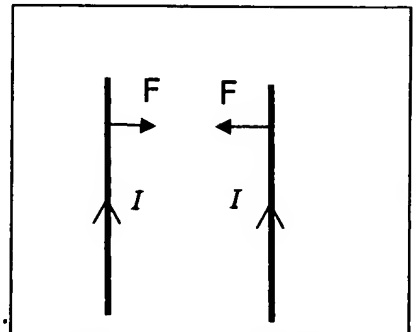

Figure 1

The key feature of this patent is the following:
The currents in the two wires are phased, such that the arrival of the *wire 1 wave* at wire 2, coincides with current in wire 2, causing a force in wire 2. BUT, the *wire 2 wave* arrives at wire 1 when wire 1 is not conducting, so there is no force experienced by wire 1.

The term *electromagnetic wave* above is used to appeal to common sense, but the patent application specification uses the more complicate framework of relativistic electrodynamics. It is the use of relativistic electrodynamics that makes this device possible. The math is complicated, but it is valid, having been established by Albert Einstein and Dick Feynman, both of whom received Nobel Prizes for their work.

I do hope that the above explanation, and the amended specification, is sufficient to process this application. May I emphasize that this propulsion device needs to be recognized in order to help humanity develop deep space exploration.

May I thank you for your help in progressing this patent,

Sincerely

Benjamin LaBorde

Dr Benjamin La Borde